



# INSTRUCTIONS

J01734

2006-01-26



## SOFTAIL® PROFILE® LOW REAR SHOCK ABSORBER KIT

### GENERAL

#### Kit Number

54648-00A, 54665-03

#### Models

These kits fit 2000 and later Softail® model motorcycles except FXSTD/I.

#### ⚠ WARNING

**Installation of this kit may affect cornering clearance. This could distract the rider, causing loss of control which could result in death or serious injury. (00441b)**

#### NOTE

*Rear shock absorbers on Softail models cannot be repaired. If a shock absorber becomes damaged, it must be replaced.*

#### Additional Parts Required

#### NOTE

*A Service Manual for your model motorcycle is available from a Harley-Davidson Dealer.*

Snap-on® Tool Co. adapter, Part Number SRES 24, is necessary to gain access to the shock absorber bolts.

Loctite® 243 (blue), Part Number 99642-97, is available from a Harley-Davidson Dealer.

Loctite® Anti-seize Lubricant, Part Number 99818-97, is available from a Harley-Davidson Dealer.

#### Kit Contents

See Figure 1 and Table 1.

### REMOVAL

#### NOTE

*Snap-on Tool Co. adapter, Part Number SRES 24, is necessary to gain access to the shock absorber bolts.*

1. Place the motorcycle on a lift and secure the front wheel.
2. Use an overhead crane or hoist to lift the rear of the motorcycle. Attach to the frame or rear fender area to allow the rear fork to travel.
3. Place a screw jack under the rear wheel to support and adjust the rear fork during shock removal and installation.

#### ⚠ WARNING

**Be sure rear wheel is supported when removing rear shocks. If wheel is not supported rear fork can drop down, which could result in death or serious injury. (00481b)**

4. See Figure 1. Remove the bolt and washer that fasten each stock shock absorber to the rear fork, and retain for re-installation.
5. Remove the flanged locknut (4) and washer/grommet assembly (3) fastening each shock absorber to the frame crossmember. Discard the old shock and all the threaded-end attaching parts.

### INSTALLATION

1. Remove the flange nut (4) and outer washer/grommet assembly (3) from the new Profile® Low rear shock absorber. Leave the bushing (2) and inner washer/grommet assembly on the shock-absorber shaft.
2. Insert the shock-absorber shaft through the frame crossmember.
3. Slip the outer washer/grommet assembly (3) onto the shock absorber shaft (grommet side first), and loosely fasten with the flange nut (4). Check that the washer/grommet assemblies properly fit the hole in the frame crossmember. Do not tighten at this time.
4. Repeat Steps 1, 2 and 3 for the other shock absorber.
5. Align the shock absorber eye with the rear fork mount by adjusting the rear wheel height with the screw jack.
6. Fasten the shock absorber to the rear fork with the stock washer and bolt removed earlier.
  - Apply Loctite 243 (blue) to the bolt threads.
  - Apply Loctite anti-seize compound to the bolt shoulder.
  - Thread the bolt through the shock absorber eye and into the rear fork mount, but do not tighten.
7. Repeat steps 5 and 6 for the other shock absorber.

#### NOTE

*Snap-on Tool Co. adapter, Part Number SRES 24, is required to gain access to the shock absorber bolts. When adding an adapter or extension to a torque wrench, bolt torque must be computed. A Torque Computer, Part Number SS-306G, is available from Snap-on Tool Co. The computer is easy to use with dial- or click-type torque wrenches.*

8. Tighten each rear shock mounting **bolt** to 156–176 N·m (115–130 ft·lbs).



9. Tighten each flanged nut (4) to 43.4–52.9 N·m (32–39 ft-lbs).

## SHOCK ABSORBER ADJUSTMENT

### NOTE

*The initial shock-absorber spring-compression setting is set to the minimum preload position. Both shock absorbers are set equally from the manufacturer.*

*Adjust shock-absorber spring compression to accommodate the weight the motorcycle will usually carry.*

1. See Figure 1. Place a mark in the same position on the adjuster plate (5) of each shock.
2. Loosen the jam nut (6) on each shock.
3. Use the shock absorber adjustment spanner wrench (7) from this kit to rotate each adjuster plate to loosen or tighten the shock-absorber springs.

### ▲ WARNING

**Adjust both shock absorbers equally. Improper adjustment can adversely affect stability and handling, which could result in death or serious injury. (00036b)**

### NOTE

*Both shock absorber adjuster plates must be adjusted to the same length. Unequal spring adjustment may result in erratic handling and loss of control.*

- Turn the adjuster plates OUT (counter clockwise, toward the jam nut), to increase spring preload for heavier loads.
  - Turn the adjuster plates IN (clockwise, away from the jam nut), to decrease spring preload for lighter loads.
4. Adjust both shock absorbers equally, the same number of turns, and to the same position relative to the marks made in Step 1.
  5. Tighten the jam nut (6) against each of the shock absorber adjuster plates (5).

### NOTE

*Make sure motorcycle is supported as lifting and securing devices are removed. Failure to properly support motorcycle may cause it to fall over, which may result in death or serious injury.*

6. Remove the screw jack from under the rear wheel. Lower the rear of the motorcycle back down with the crane or hoist, then free the bike from the lifting and securing devices.

# SERVICE PARTS

is03086

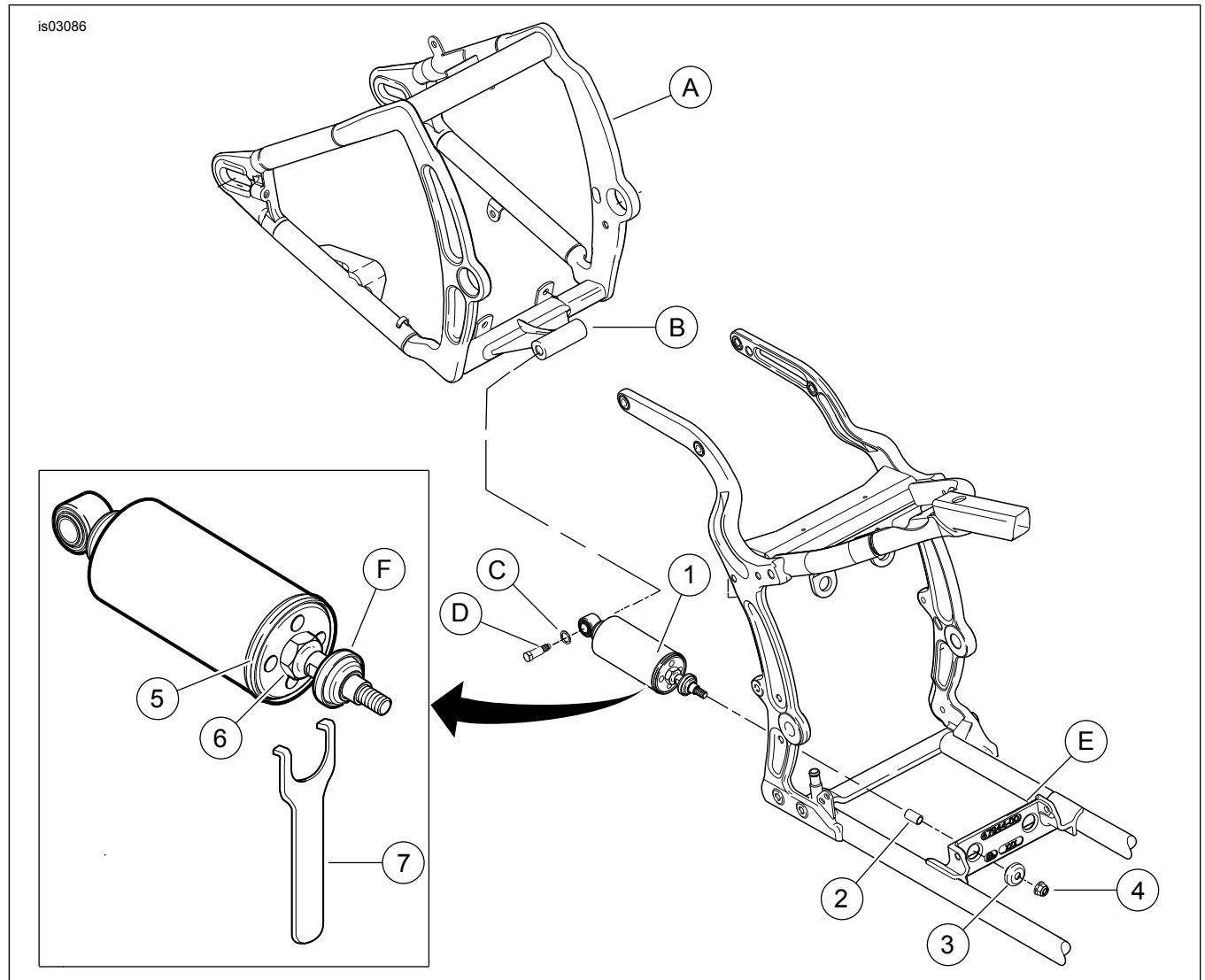


Figure 1. Service Parts: Softail Profile Low Rear Shock Absorber Kit

Table 1. Service Parts: Softail Profile Low Rear Shock Absorber Kit

| Item | Description (Quantity)                       | Part Number         | Item            | Description (Quantity)        | Part Number |
|------|--|---------------------|-----------------|-------------------------------|-------------|
| 1    | Shock Absorber (Chrome) Kit Number 54648-00A | 54649-00A           | Reference Items |                               |             |
|      | Shock Absorber (Black) Kit Number 54665-03,  | 54664-03            | A               | Rear fork                     |             |
| 2    | Bushing                                      | 56182-00            | B               | Rear fork mount               |             |
| 3    | Outer washer/grommet assembly                | 56183-00            | C               | Stock washer                  |             |
| 4    | Nut, flange w/nylon insert                   | 45764-00            | D               | Stock bolt                    |             |
| 5    | Adjuster plate                               | Not Sold Separately | E               | Frame crossmember             |             |
| 6    | Jam nut                                      | Not Sold Separately | F               | Inner washer/grommet assembly |             |
| 7    | Spanner wrench                               | 94455-89            |                 |                               |             |